

# **Massachusetts Sea Turtle Disentanglement Network**

## ***Section 6 Final Report***

***June 2006 to May 2007***





Section 6 funds distributed to the Massachusetts Division of Marine Fisheries (DMF) were used to contract the Provincetown Center for Coastal Studies's (PCCS) management of the Massachusetts Sea Turtle Disentanglement Network (MASTDN). The funds were utilized to meet NOAA NMFS stated Section 6 funding goals of development and implementation of a management plan, collection of scientific data, and public education and outreach.

The Commonwealth of Massachusetts has historically recorded high numbers of entangled sea turtles compared to other states in the Northeast Region. This trend continued in 2006. In 2006 MASTDN received six entanglement reports in Massachusetts waters. Four of those reports were confirmed to be leatherback sea turtle entanglement cases, the remaining two reports were unable to be confirmed. This represents half of the eight confirmed turtle entanglement cases for the entire NMFS Northeast Region for the same period. The four confirmed Massachusetts cases resulted in two successful disentanglements, one entangled live turtle that could not be relocated by the response team, and one dead entangled turtle.

#### *Management Plan and Network Coordination*

PCCS performed eight network training sessions (appendix I), and one outside of network training, during the contract period. Nine PCCS staff members were trained at two training sessions in Provincetown. Twenty one individuals representing seven organizations in southeastern Massachusetts received network training at the Marion Natural History Museum. Organizations represented at that training included the Massachusetts Division of Marine Fisheries, Marion Harbormaster's Office, Massachusetts Environmental Police, Coalition for Buzzards Bay, Marion Natural History Museum, Cape Cod Consultants, and Massachusetts Audubon Wellfleet Bay Sanctuary. The Massachusetts Division of Marine Fisheries New Bedford Field Station received a field exercise drill for five of their staff. Those individuals are the primary responders in the New Bedford area. Four trainings were held at United States Coast Guard stations in Gloucester, Provincetown, Chatham, and Woods Hole for the staff and crew of those stations. The one outside of network training was held in Riverhead, New York, for seventy attendees at the request of the New York State Department of

Conservation. The State of New York started a formal sea turtle disentanglement network in June of 2006 and requested training and guidance from MASTDN.

Throughout the entire contract period continuous on-call coverage of the sea turtle entanglement reporting hotline was maintained. Accurate reporting is the essential first step in documenting, and subsequently responding to an entangled sea turtle. PCCS continues to provide an easy, reliable route for agencies, such as the Coast Guard, to pass on entanglement reports through the Marine Animal Entanglement Hotline 1-800-900-3622. In addition, as part of the effort to ensure timely response PCCS maintained a rapid response vessel and crew for entangled sea turtle response in Cape Cod Bay. The vessel on stand-by was the *R/V Ibis*, a 39' fast-response rescue and research vessel capable of transporting a crew and needed equipment to reports in Cape Cod Bay and surrounding waters as needed.

Two additional network disentanglement kits were placed during the contract period to supplement the existing ten kits currently maintained by MASTDN. The first kit was placed at a PCCS staff member's residence in Brewster, MA. This location was chosen based on availability of trained responders in proximity to an area of high historic entanglement reports. Maintenance was performed on the existing ten network kits as needed. The second kit was placed at the Massachusetts Division of Marine Fisheries Field Office in New Bedford, MA. This location was chosen based on availability of trained responders in proximity to Buzzards Bay, an area of high historic entanglement reports.

#### *Collection and Dissemination of Scientific Data*

The standardized report forms now in place, the central location for receiving reports, and the focus on documentation in all training sessions has dramatically improved the quality of data collected. As more data is collected by MASTDN it will become an invaluable resource for policy-makers and researchers. Through work with researchers from the University of New Hampshire and New England Aquarium an extensive amount of data was collected on the two turtles that were successfully released during the contract period. Both turtles were tagged and morphometric data was collected.

In an effort to spread the knowledge and experience gained by MASTDN an abstract, entitled *FORMALIZING DISENTANGLEMENT EFFORT: THE MASSACHUSETTS SEA TURTLE DISENTANGLEMENT NETWORK, 2005-2006* (appendix II), was submitted to, and accepted by, the review committee of the 27<sup>th</sup> International Sea Turtle Society Symposium. This poster was presented in February of 2007 at Myrtle Beach, SC. The poster highlighted the geographical relationship of the cases received from 2005 to 2006, and also tools and techniques developed by MASTDN and the Atlantic Large Whale Disentanglement Network.

An oral presentation entitled “Using two leatherback disentanglement cases to understand the benefits of an organized disentanglement response” was presented at the Northeast Region Stranding Conference held in Atlantic City, New Jersey in May of 2007. This presentation compared an untrained ad-hoc response to a trained network response and highlighted the improved safety, both to animals and humans, as well as the improved data collection of a trained network response.

#### *Education and Outreach*

Eleven outreach and public education presentations were conducted during the contract period. These presentations were given at the PCCS for Americorps Cape Cod, Snow Library in Orleans MA., a YMCA retirees convention in Dennisport, the Cape Cod Natural History Museum in Brewster, and seven dockside presentations for “classroom at sea” students aboard the *S/Vs Lady Maryland and Spirit of Massachusetts* while in port in Provincetown. In addition over 1,400 MASTDN reporting decals were distributed to local marinas and network member agencies for distribution to the boating public. In addition to these outreach deliverables, the MASTDN website (appendix III) was continually maintained and updated as needed during the contract period. This website continues to be utilized as a reference and education tool for network members, and agencies in other states starting networks, by cataloging confirmed entanglement reports and associated documentation.

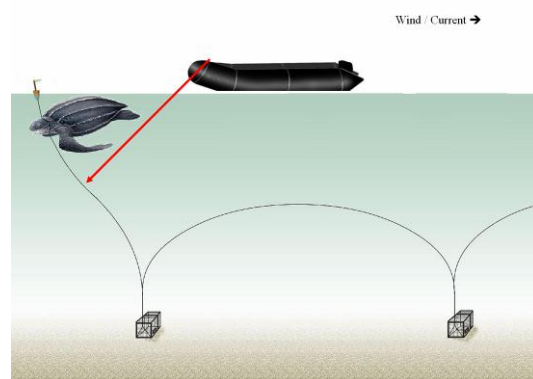
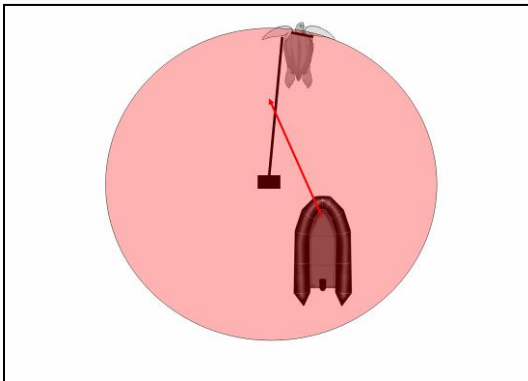
## Appendix I

### *Representative slides from MASTDN training session*



### Anchored vs. Free Swimming

<ul style="list-style-type: none"> <li>• Easier to locate</li> <li>• Standing by - recommended</li> <li>• May actually be free swimming</li> <li>• Turtle may drown</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to verify</li> <li>• Standing by - required</li> <li>• Difficult to attach a control line</li> <li>• Survivability</li> </ul>
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### Safety

- Animal hazards
  - Biting?
  - Crushing
- Line handling
  - Wear gloves
  - Never hand wrap
- Vessel stability
- Personal equipment
  - PFD
  - Safety knife
- Never get in the water

### Acknowledgements

All of the member agencies of the Massachusetts Sea Turtle Disentanglement Network

Research Collaborators:

- Large Pelagics Research Lab, University of New Hampshire
- New England Aquarium
- Mass Audubon, Wellfleet Bay Wildlife Sanctuary

Funding and Support:

- NOAA Fisheries, NERO and Section 6
- Massachusetts Division of Marine Fisheries
- United States Coast Guard







*Poster presented to the 27<sup>th</sup> International Sea Turtle Society Symposium*  
*Myrtle Beach, South Carolina*

**FORMALIZING A DISENTANGLEMENT NETWORK:  
MASSACHUSETTS SEA TURTLE DISENTANGLEMENT NETWORK, 2005-2006**

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## The Network

The Massachusetts Sea Turtle Disentanglement Network was formalized in 2005 to ensure timely response to reports of sea turtle entanglements in the state of Massachusetts. The goals of the network are to provide efficient and trained response to reports of entangled turtles and collect vital data that can be utilized to analyze human interactions with endangered and threatened species of sea turtles.

**The network consists of 84 trained marine professionals, including:**

- Local / State / Federal Marine Agencies
  - Non-profit and Academic Research Organizations
- Annual trainings and updates are conducted for network participants.**

Thirteen disentanglement equipment kits are stationed throughout Massachusetts in areas of historically high reports of entanglement.

**Seasonality of entanglement reports typically spans from June through October.**

**A network website was created to document cases and update members on recent activities/techniques.**



## Equipment and Techniques

**Most tools and techniques were adopted from the Atlantic Large Whale Disentanglement Network for large whale disentanglement.**

**Network experience suggests controlling the section of line below the entangled turtle to reduce the constriction of entangling lines.**

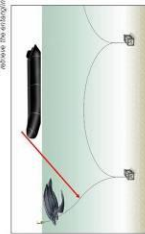
Unwrapping the entangling line when possible, rather than cutting, provides an extra measure of safety for the turtle, reduces the possibility of creating ghost gear, and allows for gear documentation




**Flying Pole Grapple** – this tool can be deployed from the end of poles to attach a control line to the antipinging gear below the turtle and assist in bringing the animal to the vessel.



Typical Fixed Gear Engagement - The red line depicts the attachment of a control line from the responders' vessel below the turtle to the weighted engaging line. This reduces the chance of collision hazard to the turtle.



## Events and results, 2005-2006



28 Reports in 2005 and 2006  
23 Reports were confirmed by MASTDN  
16 Responses by MASTDN members  
10 Successful disentanglements  
4 Documented cases of entangled dead turtles

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Accurate documentation of dead entangled turtles provides important information to industry and resource managers.

Discussions with fishermen at industry conferences indicate that the number of reports received by MASTDN are not the full extent of entanglement cases.

Standing by entangled turtles has proven to be essential to the success of Network responses. In 7/7 cases, responders disentangled turtles that had a stand by while 3/9 were disentangled without stand by.

The importance of standing by is demonstrated by case TD0050c. Responders were unable to relocate a turtle off Wellfleet after the report person left the area. Photos taken by the report person were later matched to a turtle that was disentangled the following day from single pot fishing gear in Provincetown Harbor.



MASTON has begun collaboration with the New England Aquarium and University of New Hampshire researchers to perform more extensive health assessments, and to work on methods to restrain entangled leatherback turtles for satellite tagging.



**Case Training -** Junior Health Assessment Nov. 30, at 6:00pm

## Acknowledgements

Aquinnah DNR, Cape Cod Standing Network, Cape and Islands Harbormaster Association, Dennis DNR, Eastham DNR, Massachusetts Audubon Wellfleet Bay, Massachusetts Department of Marine Fisheries, Massachusetts Environmental Police, Massachusetts Lobsterman's Association, Massachusetts Shellfish Officers Association, MA State Police, NOAA Fisheries, New England Aquarium, Provincetown Center for Coastal Studies, Seawall Bank NIMS, US Coast Guard, University of New Hampshire, Woods Hole Oceanographic Institution, Whale Center of New England



Report entangled sea turtles to 1-800-900-3622  
Please contact Brian Sharp with additional questions at (508)487-3623 x.104 or [bsharp@constatsfunders.org](mailto:bsharp@constatsfunders.org)

## Appendix III

### Representative pages of MASTDN website

